

REMARKS

In the prior response, Applicants incorporated the allowable subject matter of the claims indicated as allowable by the Examiner in the first Office Action. The Examiner has now made a new grounds of rejection. Claims 1-5, 10-12, 16, 18-22, 26-28, 31, 33, and 34 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent 6,438,370 to Einola et al. in view of U.S. Patent 6,058,310 to Tokuyoshi. This rejection is respectfully traversed.

As the Examiner admits, Einola fails to disclose two of the independent claim features including: (1) a radio access network shared by two operators, and (2) that the received information (associated with the one geographic area used to determine whether to perform a geographic coverage area update procedure) “indicates that the geographic coverage area update procedure should be performed for geographic coverage areas that are shared by the two operators and the geographic coverage area update procedure need not be performed for geographic coverage areas that are not shared by the two operators.” The Examiner relies on Tokuyoshi for these missing features. This reliance is misplaced.

The Examiner contends that Tokuyoshi discloses a radio access network shared by two network operators and relies on text in columns 2, 6, and 8. Applicant respectfully disagrees. Tokuyoshi does not mention network operators at all, and instead, focuses on radio zones where each base station has a radio zone of coverage, see for example, zones Z1-Z3 shown in Figs. 1 and 6 and zones Z1-Z4 shown in Fig. 5. A common term used by those skilled in the mobile communications art for “radio zone” is a “cell.” Typically, each cell and each base station are not operated by a different network operator. Indeed, until recently, the common practice is for a network operator to solely operate its own base stations and base station cells or “radio zones.”

Nothing described in Tokuyoshi suggests any variance from this conventional, single network operator-based approach.

In contrast, the present application is concerned with shared networks, where a shared network is a radio access network infrastructure shared by two or more cellular operators, typically to reduce the costs of network build out and maintenance. Figure 2 in the application illustrates an example shared network 1 and includes a core network with one or more core network nodes 2 coupled to a radio access network 4 which provides radio access service to a geographic coverage area 6. The geographic coverage area 6 is divided into several representative location areas (LAs), some of which are “owned” or operated by operator A, and some which are owned or operated by operator B. For example, location area LA-A1 belongs exclusively to operator A, and location area LA-B1 belongs exclusively to operator B. On the other hand, location area LA-A2 owned by operator A, and location area LA-B2, owned by operator B, overlap in coverage area. As explained in the background of the application, this shared network operator situation creates a number of unique signaling situations that are not problematic when a radio access network is not shared.

Thus, the fundamental assumption by the Examiner with respect to Tokuyoshi is faulty. Tokuyoshi’s decision whether to perform location registration has nothing to do with whether or not a particular radio zone is shared by two operators or not. Instead, Tokuyoshi’s registration procedure is based entirely on the signal strength of signals transmitted by nearby base stations. Accordingly, even if Einola and Tokuyoshi could be combined for purposes for argument only, that combination still fails to disclose (1) a radio network shared by two operators, and (2) indicating whether an update procedure should be performed for geographic areas “shared by

the two operators” or need not be performed for the areas that “are not shared by the two operators.”

Claims 38 and 39 stand rejected under 35 U.S.C. §103 as being unpatentable over Einola in view of U.S. Patent 6,763,233 to Bharatia. This rejection is respectfully traversed.

Claim 38 has been amended to include that the UTRAN is shared by two different UTRAN operators and that “the location area access restriction field indicates that a location area update procedure should be performed for location areas that are shared by the two UTRAN operators and the location area procedure need not be performed for location areas that are not shared by the two UTRAN operators.” Neither Einola nor Bharatia discloses or suggests these claim features.

The application is in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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